HOW TO FULLY UNDERSTAND THE GREAT YACHT RACES

RACES FOR AMERICA'S CUP WILL BE CONTEST OF RIVAL CREWS AS WELL AS YACHTS

Seamanship of Men as Important to Victory as Sailing Qualities of Craft.

IS A BATTLE OF SAILS.

Each Captain Plans Their Use According to Wind and Sea Conditions.

The present series of races for the famous America's Cup will be sailed over two courses off Sandy Hook, so laid out as to extend to the utmost the seamanship of the rival crews and the sailing qualities of the two yachts.

The races begin Thursday and will be sailed every other day until Shamrock IV. or Resolute has won three of the five races that are scheduled. Three straight victories would end the series and determine the ownership of the cup. The races are scheduled to start at 12 o'clock noon (daylight saving time), and each to be considered a race must be concluded within six hours of the firing of the starting gun from the committee boat. Accidents to boats or crew do not necessitate a calling off of the race, though heavy seas and squally weather may force a postponement from day to day.

To the landsman the myriad intricate spars, ropes and sails of these great racing machines, together with their technical names, will remain forever a mystery, for racing in one of these great seventy-five-footers is going to be a rich man's sport for many a year. The following general outline of terms of description of the racers is written with a view of making clear to the average landsman a mind picture of the racers, so that he may visualize the contest from the day-by-day descriptions that will appear in The Evening World.

START TO BE MADE OFF SANDY HOOK LIGHTSHIP.

The start of the races will be made off the Sandy Hook Lightship, and the course will be signalled to the racing yachts from the committee boat. Two courses are available, and their use will be alternated. The first race is likely to be along a straight line fifteen miles out to sea and return; the second over a triangular course each leg of which will be ten miles. Each race, therefore, is of thirty miles.

Yacht racing demands that every possible sail that may be used during the course of the race shall be ready for immediate use. Each yacht carries three or four complete suits of sails, which are changed frequently, owing to their stretching in the heavy winds.

Before the race each skipper, with his knowledge of the wind and sea conditions and the course in mind, has laid out his plan of campaign, and his crew has accordingly prepared the sails it is intended to use.

The first sail to be set, of course, is the mainsail, the one sail that must invariably be carried. This great spread of cotton canvas weighs many tons and is held in place by being laced at the bottom to the boom, a great, movable pole that is attached to the mainmast a few feet above the level of the deck and extends many feet beyond the stern of the racer. The top of the mainsail is laced to the gaff, a shorter wooden spar that is hoisted along the mainmast by ropes or steel cables known as halyards. The mainsail is attached to the mainmast by wooden or steel hoops that slide up or down as the sail is hoisted or lowered.

An idea of the immense size of the mainsail carried by the cup racers may be gleaned from the fact that if the sails of the Resolute were made from ordinary bed sheets, fifty-four inches wide and eighty-one inches long, it would require 270 of these sheets sewed together to give an equivalent sail area.

Once the mainsail is set, the topsail is sent aloft. In light winds, a club-topsail is used; should gales threaten, a smaller "working topsail" will be set. This is a triangular sail, attached to the very tip of the topmast and along the gaff of the mainsail.

The club-topsail, however, is much larger, towering high above the topmast by means of a club-topsail sprit, and beyond the end of the gaff by a club-topsail boom. This sail is attached to these additional spars ("bent," the sailorman calls it) before being hoisted into place, and is sent up "flying," or unwrapped. Usually a few men of the crew are sent up to the spreaders to guide it aloft and to clear away any jam in the number of ropes or "sheets" used in hoisting it.

These "spreaders," by the way, are steel arms, extending from either side of the mainmast at the top of the gaff, and along them are stretched taut steel wires to give added strength and steadiness to the mast, against which such a powerful force is constantly at work when the huge sails are drawing full.

While one section of the crew is setting the club-topsail, another is bringing up the jibs and staysail, done up in "stops" and ready for hoisting, though many times these latter sails, too, are sent up flying. A sail is said to be sent up in "stops" when it is rolled up, sausage-like, and tied together with bands of light yarn that will break easily and permit the wind to fill the sail when it is "broken out" at the skipper's command.

MANY COMBINATIONS IN WHICH JIBS MAY BE USED.

The number and kinds of jibs to be set during the course of the race will depend entirely upon direction, weather conditions, wind and the state of the sea, and there are a countless number of combinations in which the various types of jibs shown in the accompanying cut may be used.

The most difficult course is the triangular one of ten miles to each leg, testing the sailing qualities of the yachts on every angle of the wind, enabling the use of every variety of sail, including the "kites," as the big, light, flying balloon jibs, spinnakers and topsails are known.

The spinnaker and balloon jib, or ballooner, are used in running dead before the wind, or with the wind astern. The sheets of the mainsail are eased off until that sail, with its attached clubtopsail, is entirely outboard, or at a 90 degree angle with the yacht itself. This may be thrown out either to the port (left) or starboard (right) side of the yacht.

The spinnaker boom is usually a solid wooden spar, kept, when not in use, lashed along the deck where it can be conveniently cast loose and rigged. When a turn brings the yacht to the point where the "kites" may be set, the spinnaker is brought from below and "stopped" up, to be hoisted at the proper moment to the very top of the mast.

The spinnaker boom is rigged at right angles to the hull, on the side opposite the mainsail, and the spinnaker is hoisted out to the end of the spinnaker boom and "broken out," filling instantly in the wind like the huge balloon it is.

Unless the wind on this leg of running before the wind be too great, the balloon jib also is sent along in stops and broken out, superseding all the other jibs and giving the yacht the greatest spread of canvas it can carry under any condition. The spinnaker is used only in running before the wind.

The sending up of both these last two great sails has been described as in "stops." It is possible, of course, to send them up and set them "flying," though the latter is a perilous proceeding, as the skipper of Lord Dunraven's Valkyrie is willing to testify, after his fatal attempt to send his spinnaker up flying in his race against Vigilant, his sails being carried away, and with them the Britisher's hope of winning the cup.

These sails, as has been said, are used only before the wind, and it is easy for the layman to understand how a vessel can travel in the same direction as the wind.

How a vessel can sail from a point to another point against the wind, or in a direction opposite that from which the wind is blowing, is the layman's bugaboo. To sail directly into the wind, of course, is impossible, but it is possible to make headway in that direction by zig-zagging across the path of the wind, by what is known in sailing as "beating," or "tacking." In this way, the yachts can catch the wind in their close-hauled sails and tack to and fro, advancing each tack in a direction actually against the wind.

HOW A YACHT MAKES PROGRESS AGAINST THE WIND.

A boat is said to be on the port tack when the wind is coming from her port (left) side, and she is heeled over to starboard or right. A boat is on the starboard tack when the wind strikes her sails over the starboard or right side, heeling her over to port.

Yachts are on a "split tack" when, though sailing for the same point, one goes off on a port tack and the other on the starboard tack, apparently heading away from each other, but in reality endeavoring to advance against the wind, meeting each other again when they split tacks again and come back heading toward the imaginary straight line of the course.

To sail from point to point with the wind blowing approximately across the course at a 90-degree angle to the direction in which the boats are sailing is known in sailing as "reaching," and here again the vessel's progress in a direction opposite from that from which the wind comes by hauling the sheets close (drawing the mainsail along the centre of the yacht) and "reaching for the mark."

Glossary of Terms Used In the Races

How the Landsman Can Follow the Forthcoming Contests Between Shamrock and Resolute for the America's Cup.

ABAFT—Toward the stern of the vessel.

ABEAM—On either side of the vessel amidships.

AFT—Toward the stern.

ASTERN—Opposite from ahead.

BATTEN—Light wooden strips sewed into sails to keep them from sagging.

BOARD—The distance sailed by a vessel on one tack.

BOOM—A spar, connected to the mast by a jaw, holding the foot of the sail.

BOW—The forward part of the vessel.

BOWSPRIT—A spar projecting forward from the bow of the vessel, being the lower support for the jibs.

FOOT—(a) The lower edge of the sail, and (b) to travel.

GAFF—The spar holding the head of the mainsail, by means of which it is hoisted up the mast.

GYBE—To change the sails from port to starboard or vice versa without going in stays or delaying the progress of the vessel.

HALYARDS—Ropes used for hoisting and lowering sails and spars.

HAULED (close hauled)—Sailing with the vessel pointed close to the direction from which the wind is coming.

HEAD—The bow of the vessel as distinguished from the stern.

HEELING—The listing of a ship caused by the force of the wind on the sails.

JIB—Any triangular sail, set on a stay that extends from the bowsprit to the masthead.

KITES—Light and lofty sails for use in light winds.

Lee—The side opposite that from which the wind comes.

LOG—(a) an instrument for measuring the speed of a vessel, and (b) the diary of the happenings on a vessel.

LUFF—(a) to bring a vessel nearer into the direction from which the wind comes, and (b) the portion of the mainsail along the mast, between the boom and the gaff.

LEACH (of sail)—The portion of the mainsail farthest removed from the mainmast, between the gaff and the boom.

MAINSAIL—The chief sail of a vessel, bent from gaff and boom to the mainmast.

MAST—A stick or spar of round timber or tubular steel set upright in a vessel to sustain the yards, booms and sails.

POINT—To sail close into the direction from which the wind comes.

PORT—The left side of the vessel, looking forward.

PORT TACK—To sail with the wind coming coming over the port side of the vessel.

RUN—Going before the wind, or in the direction toward which the wind blows.

REACH—To sail with the wind slightly forward of the beam, or abeam.

SHEETS—Ropes used for operating a sail, either easing it off or hauling it in.

STARBOARD—The right side of the vessel looking forward.

STARBOARD TACK—To sail with the wind coming over the starboard side of the vessel.

STAY (in stays)—When a vessel is going from one tack to another, she is in stays at the moment she heads directly into the wind and her sails spill all the wind and flap.

SHROUDS—Stout rope, often made of wire, stretched from the masthead to the sides of the vessel, serving as a means of ascending the mast and as lateral strengthening stays for the mast.

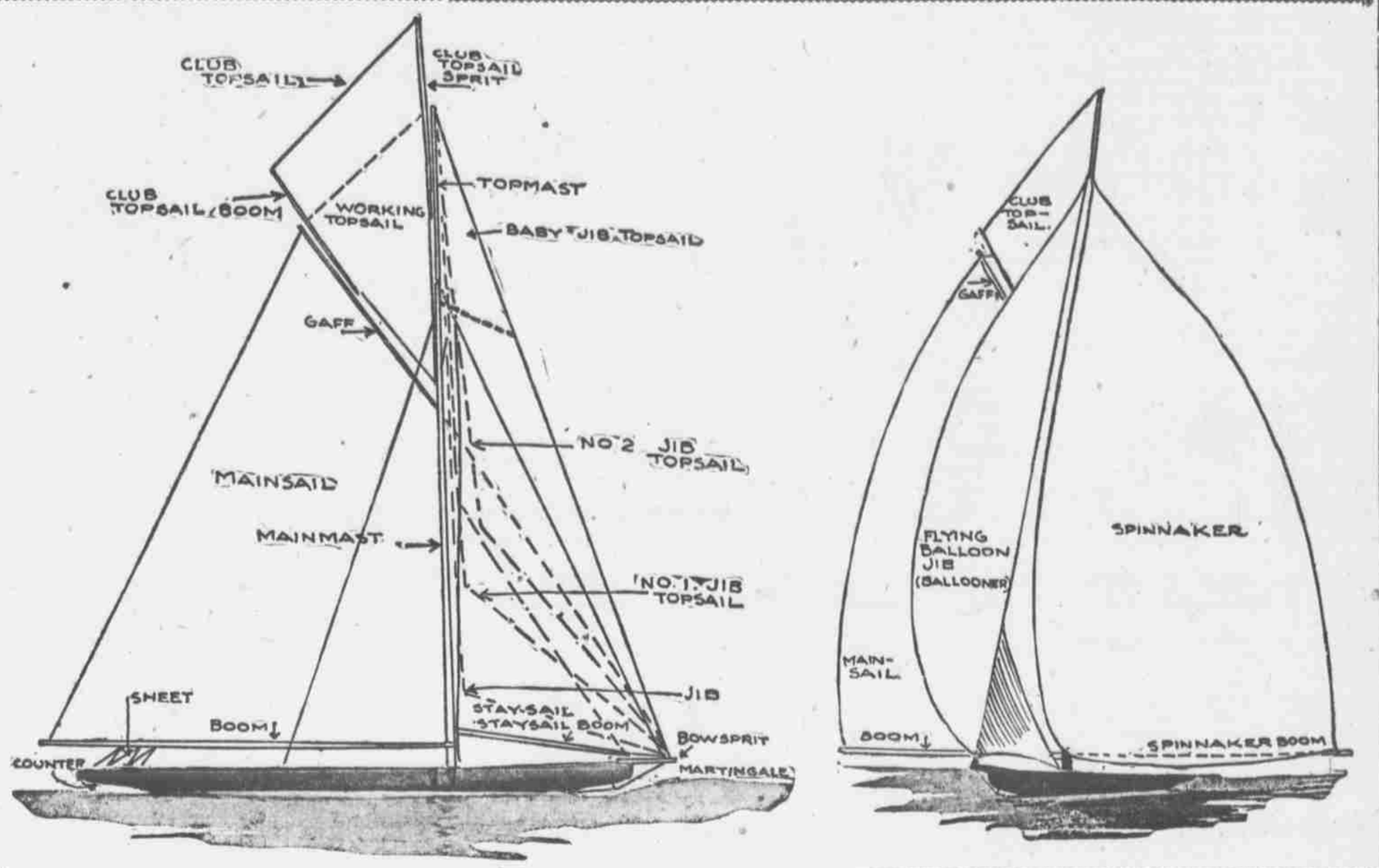
TACK—(going about)—To put a vessel about so that the wind blows against the other side of the sails from which it has been blowing, by way of the bow.

WEAR—To turn the vessel around so that the wind will come from one side to the other, carrying the stern around by the wind.

WEATHER—The direction from which the wind comes.

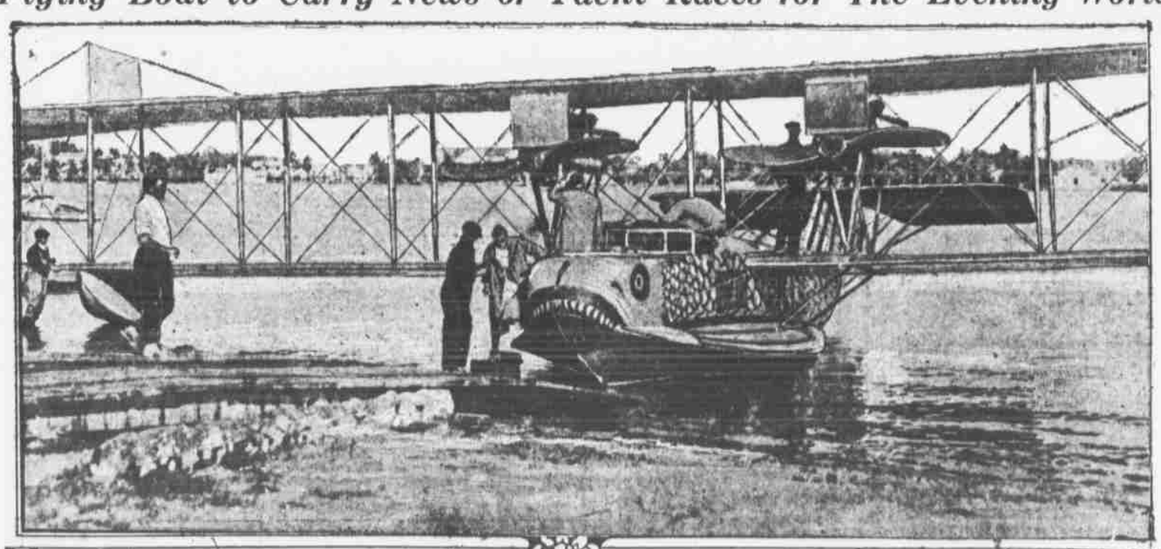
WINDWARD—Same as weather.

The Sails on the Big Racing Yachts



Keep This Copy and Know How to Follow the Race Stories

Flying Boat to Carry News of Yacht Races for The Evening World



THE AMERICA TRANS-OCEANIC COMPANIES "BIG FISH."

For the first time in the history of the America's Cup, The Evening World will cover the race between Resolute and Shamrock IV. from the air.

Through the courtesy of the America Trans-Oceanic Co. of No. 505 Fifth Avenue, of which Rodman Wanamaker is the President, reporters for The Evening World will view the speed contests from the luxurious cockpit of "The Big Fish," a Curtiss biplane, the largest and fastest privately owned airplane in America.

This huge 100-foot plane, built during the war for bombing German naval stations, will be flown by ex-Lieut. Commander David H. McCullough, U. S. N. R. F., who gained international fame as the navy pilot of the famous NC-3, flagship of the navy's "Nancy" boats which, lost in a dense fog after a fifteen and a half hour flight toward the Azores, landed in a stormy sea and was afloat fifty-two hours, her gallant crew spurning aid from the destroyer Harding and "taxying," more dead than alive, into Ponta Delgada after they had been given up for dead.

It was Lieut. Commander McCullough who trained the famous H. P. Davison unit of flyers at Port Washington and Huntington during the early stages of the war. He is now retired and is acting as General Manager of the America Trans-Oceanic Company, which, with a record of 83,000 flying miles to its credit in the four years of its existence, has never had an accident.

The America Trans-Oceanic Company is the distributing agent for the metropolitan district for the Curtiss Aeroplane and Motor Corporation, operating flying boats and planes in New York in the summer and in Florida in the winter. P. L. Freeman is New York sales manager for the company.

"The Big Fish," named because of the painting of its hull by ex-Sheriff Robert Winthrop Chanler, is driven by two 400 horse power Liberty engines, and when fully loaded will carry six tons for ten hours' uninterrupted flight.

Because of its extreme size more space is available in the cockpit of the plane than will be required by The Evening World, and Commander McCullough will carry a few paying guests on the flight, an unusual opportunity for airplane enthusiasts to see the greatest sporting event of the year. Application for reservations should be made to Commander McCullough at No. 505 Fifth Avenue.